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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: Standard Chlorine: Preliminary BTAG DATE: 6-16-93
FROM: Robert S. Davis, Coordinator (3HW13)
TO: Katherine Lose, RPM (3HW42)

A preliminary review of the Final Feasibility Study has been completed and the comments below are offered for your use in continuing the project. In general, the Final FS does not appear to be as complete as the Draft FS was. For example, the Draft FS went into more detail regarding clean up target numbers for water and sediment than the Final. In addition, the comments from BTAG on the Draft FS do not seem to have been specifically addressed. As a matter of procedure, Final reports usually contain a section where all comments are individually cited and a response offered. This document failed to do this and as a result many of our comments were either ignored, apparently, or were buried in the text. This approach makes review under short deadlines very difficult.

Specific Comments:

On page 1-26, the document concludes that the contaminants show nonuniformity of distribution. While sampling was widely distributed, it was not carried out on either a grid or a random stratified basis. In fact, I that sampling was carried out on an intuitive or 'best guess' basis. If true, then no basis for the conclusion exists. In the past, both a grid and a stratified random sampling program have been discussed and recommended. It would be appropriate to incorporate such a sampling approach in the design phase.

On page 3-14, the trench is discussed. In the past, the hydrogeologist has criticized the desing. This document fails to address this issue and is of concern ecologically because of the site's proximity to the unnamed tributary, Red Lion Creek, and the predominance of wetlands in the area.

On page 4-8 and elsewhere the soil clean-up number of 625 mg/kg is mentioned. It is my understanding that this number is derived from human health risk assessment. It is assumed that this will be the target for on site oils only, although this is never made clear in the document. The issue is being raised now because it is not protective of ecological resources. Chlorinated benzenes degrade very slowly in soil and is readily absorbed by roots and translocated into above-ground portions of plants. Long term implications to browsing animals and insects and their predators is an ecological risk that has not been addressed. It is advisable to isolate all soils with chlorinated benzenes above 30 mg/kg.

Recommendations:

1) The Final FS should not be accepted without specific point-by-point discussions of comments on the draft document.

2) The design phase should include sampling of the area on

either a grid or stratified random basis to enable the investigator to define precisely where the major concentrations of contaminants are located. While we have a map that shows that the target clean up number of 68 mg/kg is practically identical with 33 mg/kg with regard for acreage to be treated, information shows that neither number is fully protective of ecological resources. An intensive grid or stratified random sampling design will form a basis for the five-year review monitoring. (The monitoring should include both plant and animal evaluations. This has been suggested in the past -- e.g., red wing black bird -- and BTAG is still willing to participate in this part of the effort.)

3) It should be made clear where the soils slated for removal/ isolation are located with regard for ecological resources. Soils on the property site itself probably need not be as carefully dealt with as off-property soils unless it is determined that soils contaminated above 30 mg/kg will be left uncovered and available for encroachment by plants.

Off-property soils should be treated in the remedial plans in accord with the objective of maintaining contaminant-free vegetation. Vegetation should be part of the post-remedial monitoring plans.

4) It is noted that only 'readily accessible' sediments will be remediated in an effort to limit impacts to the wetlands areas. The term 'readily accessible' should be clearly and precisely defined. This, again, can be done during the design phase. While protection of wetlands is a laudable objective and conforms to ARARs, it may not serve to fully protect ecological resources. The grid or stratified ransom sampling program mentioned above should serve as the basis for remediation vis-a-vis protection of ecological resources.

5 The document should specify clean up levels for water and sediments that are protective of ecological resources. Where this is impossible under current agreements, it should leave the door open for additional and extensive clean up for areas where post-remedial monitoring indicates problems exist and where contaminant levels may be below the target clean targets.

Please do not hesitate to call me on 3155 if you have questions.